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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,462	11/20/2003	Jean-Pierre Mao	245495US41XCONT	6869
22850	7590	04/26/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHU, WUTCHUNG	
			ART UNIT	PAPER NUMBER
			2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/26/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/26/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/716,462

Applicant(s)

MAO, JEAN-PIERRE

Examiner

Wutchung Chu

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/26/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: for the timing diagrams of figures 1-4 or the elements of figure 5. Furthermore, the drawings do not clearly coincide with the written description on pages 6-9 of the specification. The drawings, taken together with these descriptions, do not adequately illustrate Applicant's invention. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. Figure 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated, as stated in the description of the drawings on page 5 of

Art Unit: 2616

the specification. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9 line 1, the recitation of "The process of packeting time duration is about equal to the total time duration" is vague and indefinite because it is not known the metes and bounds of the claimed invention. Also the term "about" makes the claim vague and indefinite because it is followed by the sentence "equal to the total time duration", which does not specify the total time duration.

Regarding claim 16 line 2, the recitation of "The process wherein a time for transmitting a message is so short compared to the packeting time that the total time is about equal to the packeting time" is vague and indefinite because it is not known the

Art Unit: 2616

metes and bounds of the claimed invention. Also the terms "compared to" and "about" make the claim vague and indefinite because it is followed by the sentence "the packeting time that the total time is about equal to the packeting time" which does not specify the packeting time.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Robins et al. (US6430184B1).

Regarding claim 1, Robins et al. discloses a process and device for communicating data packet flows, including ATM (**see column 1 line 27**) comprising the steps of:

- starting a packeting operation of asynchronous data (**see column 8 line 16**);
- receiving a message from a message composition module (**see column 8 line 32**);
- interrupting the packeting operation based on the message (**see column 16 line 17-64 and column 17 line 25-45**);

Art Unit: 2616

- transmitting a packet of asynchronous data formed during the packeting operation prior to the interrupting step (**see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received**); and
- repeating the steps of starting, receiving the message, interrupting, and transmitting thereby transmitting a plurality of packets (**see column 22 line 62 to column 23 line 14**).

Regarding claim 2, Robins et al. teaches further comprising the step of receiving the packets at the message composition module (**see column 17 line 11-45 where Queue Manager QM corresponds to message composition module**).

Regarding claim 3, Robins et al. teaches the step of receiving the packets is performed in a predefined order (**see column 8 line 23-25**).

Regarding claim 4, Robins et al. teaches further comprising the step of composing a message with the packets at the message composition module (**see column 17 line 25-45**).

Regarding claim 5, Robins et al. teaches further comprising the step of formatting the message into a formatted message (**see column 8 line 62 –column 9 line 9**).

Regarding claim 6, Robins et al. teaches further comprising the step of transmitting the formatted message (**see column 10 line 2-7**).

Art Unit: 2616

Regarding claim 7, Robins et al. teaches wherein the interrupting step (see column 17 line 43-45 where "cut-through" mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received) is triggered when the message is received from the message composition module (see column 17 line 25-45).

Claim Rejections - 35 USC § 103

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1).

Art Unit: 2616

Regarding claim 12, Robins et al. teaches a process for transmitting a packet of asynchronous data, comprising the steps of:

- packeting the asynchronous data into a packet during a packeting time **(see column 8 line 16);**
- requesting the packet **(see column 25 line 45-52);**
- stopping the packeting **(see column 16 line 17-64 and column 17 line 25-45);**
- composing a message comprising the packet **(see column 17 line 25-45);**
and
- transmitting the message during a message transmitting time **(see column 10 line 2-7).**

Regarding claim 12, Robins et al. discloses all the subject matter with the exception of packeting time (TP) and transmission time (TMS) $TP > TMS$. Robins et al. discloses a cut-through mode of operation in which packeting is ended and data transmitted before the complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received. In this mode, the time for packeting (TP) equals the maximum delay allowable before transmitting of data (TT), thereby meeting the limitations of the claim.

Regarding claim 14, Robins et al. teaches wherein the stopping step **(see column 17 line 43-45 where “cut-through” mode of operation in which packet is**

Art Unit: 2616

ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received) is triggered by the requesting step (see column 25 line 45-52).

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 8-11, 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1).

Regarding claims 8-11, 13, 15 and 16, Robins et al. discloses all the subject matter with the exception of $TP > TT/2$; $TP = TT$ when $TP > TMS$; $TP = TBS$. Robins et al. discloses a cut-through mode of operation in which packeting is ended and data transmitted before the complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received. In this mode, the time for packeting (TP) could equals the maximum delay allowable before transmitting of data (TT), or time for packeting (TP) is more than half of a total time for packeting the asynchronous data and for transmitting the message, or the time for packeting (TP) equals bus cycle time (TBC), thereby meeting the limitations of the claim.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Agarwal (US20050220110A1) discloses frame format and frame assembling/disassembling method for the frame format.
- Kohzuki et al. (US2005/0207419A1) discloses packet forwarding device and packet priority setting method.
- Kalkunte et al. (US2003/0118016A1) discloses switch fabric with path redundancy.
- Assa et al. (US2002/0018474A1) discloses efficient packet transmission over ATM.
- Viswanadham et al. (US2001/0043614A1) discloses multi-layer switching apparatus and method.
- Kuo et al. (7031343) discloses point-to-multipoint passive optical network that utilizes variable-length packets.
- Troxel et al. (US6014381) discloses system and method for distributing information throughout an aircraft.
- Wartski et al. (US 5732082) disclose system and method for multi-frame received queuing with sorting in an asynchronous transfer mode (ATM) system.
- Burrows (5303302) discloses network packet receiver with buffer logic for reassembling interleaved data packets.

Art Unit: 2616

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571 272 7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WC
Wutchung Chu



WING CHAN
SUPERVISORY PATENT EXAMINER